BALMORAL TANKS

FUEL OIL STORAGE AND DISPENSING

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FUEL OIL STORAGE AND DISPENSING

The storage of fuel oil is strictly controlled in the UK and Ireland. Tank owners are considered liable in law for any contamination or pollution caused on their own or neighbouring properties. It is therefore vital that a tank and its installation complies with legislation.

Reference should be made to the following:

- **OFTEC** www.oftec.org
  OFTEC promotes excellence in oil heating and publishes a number of booklets, technical information sheets and easy guides which cover the most frequent queries from consumers, installers and technicians. Balmoral Tanks recommends that its products are installed by OFTEC registered technicians.
- **Environment Agency (EA)** www.environment-agency.gov.uk/netregs
  Netregs provides free environmental guidance for businesses in the UK and can help you understand what you need to do to comply with environmental law and protection of the environment.
- **Scottish Environment Protection Agency (SEPA)** www.sepa.org.uk
  SEPA provides Information on Scotland"s environment, pollution prevention, regulation and other environmental initiatives.
- **Northern Ireland Environment Agency (NIEA)** www.ni-environment.gov.uk
  The NIEA protects and conserves Northern Ireland's natural heritage and built environment whilst promoting the control of pollution and best environmental practices.
- **Environment Protection Agency (EPA) Ireland** www.epa.ie
  In Ireland, the Environmental Protection Agency protects the environment through its licensing, enforcement and monitoring activities.
- **www.oilstorageregs.co.uk**

What is a fuel oil storage tank?

Balmoral fuel oil storage tanks are rotationally moulded polyethylene containers that are environmentally sensitive and cost effective.

Fuel oil storage tanks can be manufactured in horizontal or vertical orientation as a seamless single skin unit, a bunded (tank within a tank) unit or as a single skin underground unit.

Tanks can be supplied in a range of capacities up to 10,000 litres and can be used to contain a variety of liquid products such as heating oils and diesel for the following sectors:

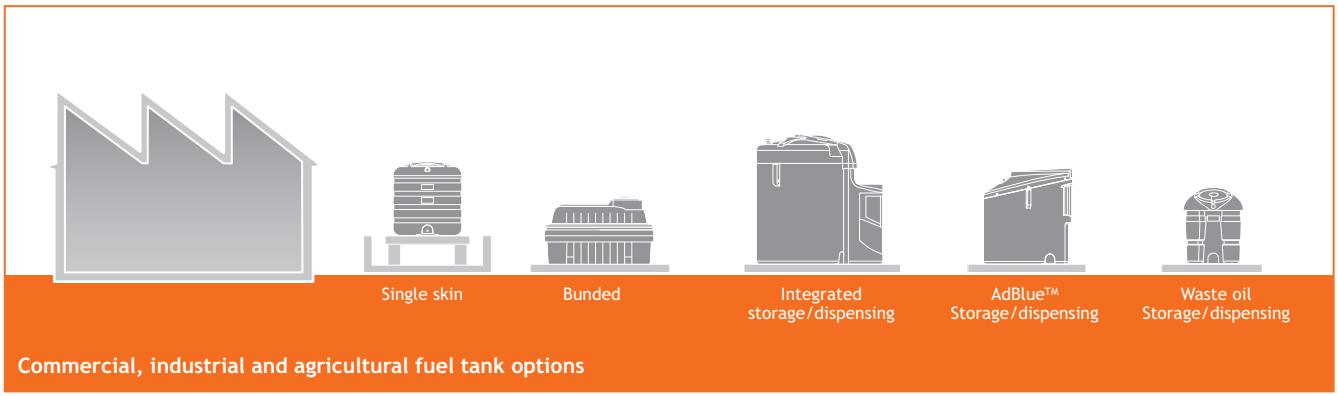
- Agricultural industry
- Commercial and private businesses
- Family dwellings (domestic)
- Industrial

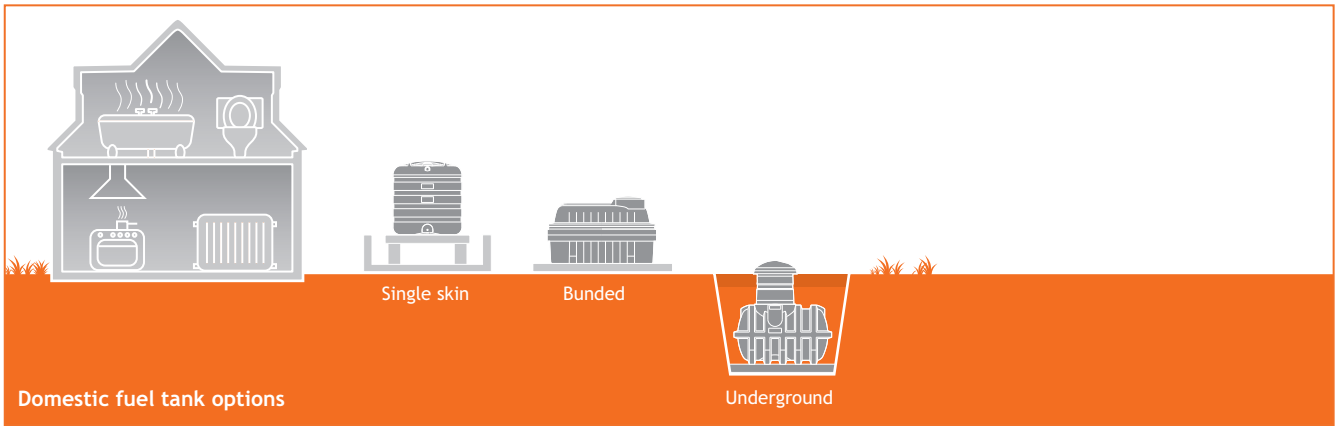
Specific agricultural, commercial and industrial tanks can be designed and manufactured for concurrent fuel oil storage and dispensing, AdBlue™ storage and dispensing and waste oil storage and disposal.

Domestic fuel tanks are designed and manufactured to provide safe, secure and discreet fuel oil storage for off-mains family dwellings.

A bunded tank should contain 110% of the volume of the largest container stored within it*

Types of fuel oil storage tank





* Source: Environment Agency - PPG2 Above ground oil storage tanks

What type of fuels/liquids can be stored in a fuel oil storage tank?

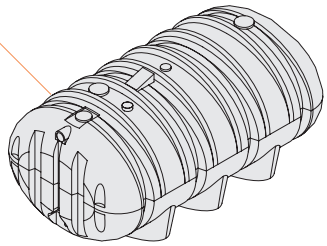
Ranging in capacities from 500-10,000 litres, fuel oil storage tanks can be used to store and dispense a variety of liquid products such as:

- Heating oils
- Diesel
- Kerosene (BS2869)
- Up to 7% mixture biofuel (BSEN14213, BSEN14214)
- AdBlue™ (AUS32)
- Waste oil

Single skin tank

One-piece seamless unit.

Can be used to contain a variety of liquid products such as:
- *Heating oils*
- *Diesel*
- *Kerosene (BS2869)*
- *Up to 7% mixture biofuel (BSEN14213, BSEN14214)*

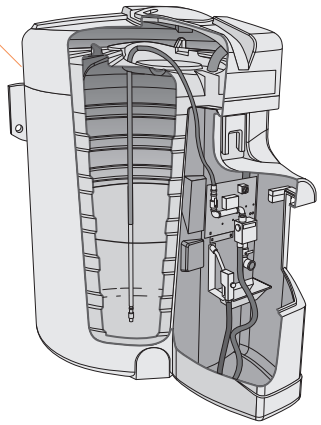


Bunded tank

'Tank within a tank' construction.

All Balmoral bunded tanks contain 110% of the inner tank volume.

Can be used to contain a variety of liquid products such as:
- *Heating oils*
- *Diesel*
- *Up to 7% mixture biofuel (BSEN14213, BSEN14214)*
- *Kerosene (BS2869)*
- *AdBlue™ (AUS32)*
- *Waste oil*

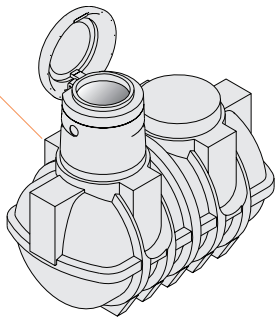


Underground tank

One-piece seamless unit.

Optimum strength and performance for underground installation.

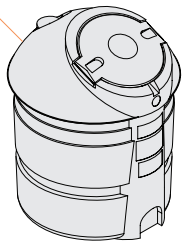
Can be used to contain a variety of liquid products such as:
- *Heating oils*
- *Diesel*



Bunded waste oil tank

Can be used for safe storage and disposal of waste oil, fuels and other liquid products.

For use at a variety of sites including garages, civic amenity sites, landfill sites and harbours.



Secondary containment will prevent oil escaping to the environment in the event of leakage from the tank or ancillary equipment. All tanks and their ancillary equipment should be situated within an oiltight secondary containment system such as a bund*

* Source: Environment Agency - PPG2 Above ground oil storage tanks

What type of tank do you need?

A bunded fuel oil storage tank is a mandatory requirement at all new agricultural, commercial, industrial, institutional and most domestic installations. A bunded tank is required for above-ground domestic installations with a requirement for storing 2500 litres capacity or greater.

In all cases, an OFTEC risk assessment should be carried out. In general terms, if the tank is located within 10m of a watercourse, 50 metres of a borehole, or is near an open drain then it must be bunded. If oil is being stored in quantities greater than 200 litres at industrial, commercial or institutional premises, bunded tanks must be used in all cases. Failure to comply with the latest phase of the Government's oil storage regulations can attract fines up to £20,000.

It is the tank owner's responsibility to ensure the installation conforms to the most recent regulations.

What size of tank do you need?

For commercial, industrial and agricultural applications this will be determined by the demand for fuel/liquid storage in each case.

For domestic applications the table below can be used as a general guide to tank sizing.

Number of bedrooms	Tank capacity
1	1135-1250 litres
2	1251-1590 litres
3	1591-2000 litres
4	2001-2600 litres
5	2601-3635 litres
6	3636-5455 litres
7+	5456-10,000 litres

To comply with Control of Pollution regulations, all standard tanks should be fitted with an overfill prevention device where an air vent cannot be observed whilst filling.

Tank selection criteria

When selecting a fuel tank for a particular application it is important that a number of factors are considered other than the use it is purchased for.

These considerations should cover the environment in which it is located, ease of filling, dispensing, safety and the simplicity of maintaining the product.

HSE

When using a fuel tank, Health and Safety is very important. Balmoral Tanks' range of fuel oil storage tanks have been designed and manufactured with this in mind.

Fill Points
All fill points on the tanks are positioned at an accessible height to ensure that a delivery driver can fill the tank safely and without danger.

Pumps
All pumps are housed externally to the inner tank so that they are accessible. If maintenance is required, pumps can be safely and easily removed.

Submersible pumps

Balmoral Tanks does not fit submersible pumps to any of its fuel oil storage tanks for the following reasons:

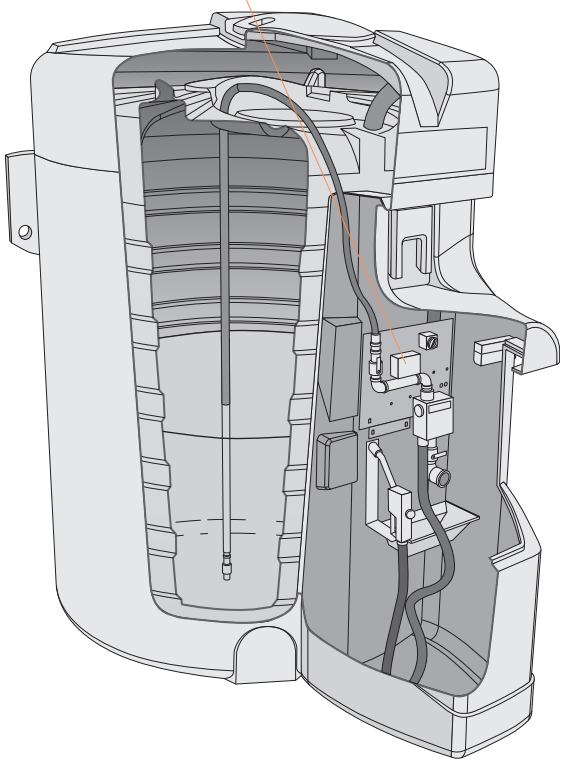
- Submersible pumps are difficult to access if they require maintenance
- During pump removal there may be various HSE concerns due to the weight of the pump and the fact that it is immersed in fuel oil - the submersible pump will be full and covered in fuel oil which can make handling difficult. Also, additional facilities and equipment may be required for health and safety while maintenance is being carried out on the pump

Environmental considerations

When selecting a fuel tank great consideration should be taken to ensure that the environment is protected for ethical and financial reasons:

- **Ethical** If the incorrect tank is selected and it leaks or is overfilled then oil/diesel could escape in to the surrounding environment causing irreparable damage to it and, potentially, your reputation
- **Financial** If the incorrect tank is selected and an incident occurs, you can be fined up to £40,000 plus clean up costs

Location of pump inside the cabinet of a vertical bunded tank



Overfill prevention

Overfills can be prevented by incorporating an overfill prevention device. The most common method in the UK and Ireland is the use of a self-regulating mechanical valve fitted to the fill line of the tank.

Balmoral Tanks fits a mechanical overfill prevention device as standard to all of its bunded tanks. The only other method promoted in the UK and Ireland is a Level Remote Control (LRC). This system relies on fuel delivery companies to operate compatible delivery tankers before it can work. Unfortunately, less than 1% of fuel delivery companies in the UK and Ireland offer this facility.

Tank equipment/accessories

The fitting of additional equipment and accessories is entirely dependent upon the planned end use of the tank. The following is a selection of options.

Accessories displayed with * are supplied as standard.

Domestic tanks

Tigerloop* Used to aid the flow of oil from top-offtake tanks.

Electronic contents gauge* Allows tank level monitoring from within the house.

Fire valve Designed to stop the flow of oil from a tank in the instance of a fire.

Overfill prevention valve* Accidental overfilling of a tank is prevented by the OPV stopping the flow of fuel from the delivery lorry.

Commercial tanks

Electronic contents gauge* Allows tank level monitoring from within the premises.

Fire valve Designed to stop the flow of oil from a tank in the instance of a fire.

Cabinet light* Allows the safe use of equipment in dark conditions. Supplied as standard with Superfill tanks >2500 litres

Overfill prevention valve* Accidental overfilling of a tank is prevented by the OPV stopping the flow of fuel from the delivery lorry.

Fuel filter When using a tank to refill vehicles the fuel filter prevents water and other third party materials from entering the vehicle.

Flowmeter* Economic way of monitoring fuel usage. Supplied as standard with Superfill tanks >2500 litres

Fuel management system Helps reduce fuel costs by managing dispensing operations. Assists in fuel storage area security.

Agricultural tanks

Electronic contents gauge* Allows tank level monitoring from within the premises.

Overfill prevention valve* Accidental overfilling of a tank is prevented by the OPV stopping the flow of fuel from the delivery lorry.

Fuel filter When using a tank to refill vehicles the fuel filter prevents water and other third party materials from entering the vehicle.

Flowmeter* Economic way of monitoring fuel usage. Supplied as standard with Superfill tanks >2500 litres

Fuel management system Helps reduce fuel costs by managing dispensing operations. Assists in fuel storage area security.

Balmoral Tanks is one of the few tank manufacturers to include a wide variety of equipment/accessories as standard.

It is vital that you check your tank specification before purchasing as many cheaper fuel tank options omit crucial operating and safety equipment.

Tank siting and installation

The storage of fuel oil is strictly controlled in the UK and Ireland.Tank owners are considered liable in law for any contamination or pollution caused on their or their neighbour's property. It is therefore vital that the tank complies with all current legislation.

Prior to selecting a fuel oil storage tank, purchasers must complete a risk assessment for their particular installation and/or application to establish the type of oil storage tank permissible.

Once the type of tank has been established a further Fire Prevention assessment must be completed to establish the correct siting and positioning of the tank.

Finally, the tank must be installed in accordance with Balmoral Tanks' installation instructions which are supplied with every tank (enclosed with the fittings) with respect to supporting the tank and expansion clearances.

Overall requirements are specified in the following legislation:

- Control of Pollution (Oil Storage)(England) Regulations:2001
- Water Environment (Oil Storage)(Scotland) Regulations April 2006
- Control of Pollution (Silage, Slurry & Agricultural Fuel Oil) Regulations:1991

Fuel oil tanks supplying domestic properties must comply with:

- Building Regulations (England & Wales) 2010:AD"J"
- Scottish Building Standards (Domestic) Technical Handbook
- Building Regulations Northern Ireland Technical Booklet L:2006
- Building Regulations: Part J (Ireland)
- BS5410 - Code of Practice for Oil Fired Systems: Part 1 or Part 2 (UK and Ireland)

Most of the above requirements will be covered by specifying a bunded tank.

The benefits of installing a bunded tank include peace of mind, flexibility of siting and potentially improved home insurance premiums.

To ensure your tank fully complies with the above, Balmoral strongly recommends that your tank is installed by an OFTEC registered engineer who is deemed to be competent in law. Alternatively, you can self install but must apply to your local Building Control Office for permission and inspection.

Further reference to oil storage regulations are available on page 15.

Will you need planning permission?*

You should contact your local authority to determine whether or not planning permission is required before you begin the project.

Domestic users will need to apply for planning permission to install a heating oil tank if:

- Greater than 3500 litres capacity
- More than 3m above ground level
- Nearer to the public highway than the closest applicable corner of the property

Planning permission is also required for any domestic storage tank for fuels other than for oil fired heating applications (ie: LPG).

If you are installing an oil tank and/or connecting pipe work and you employ an OFTEC registered installer, you will not need to involve a Building Control Service.

* Source: www.oilstorageregs.co.uk

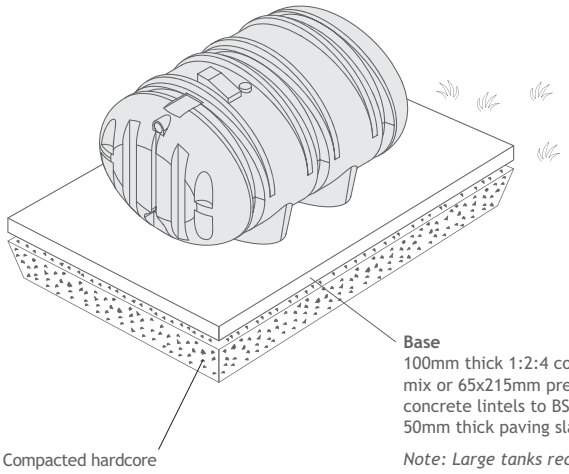
Installation

The following section shows typical installations for single skin, bunded and underground fuel tanks. Full installation, operation and maintenance instructions are supplied with each tank.

This information is provided as general guidance. Specific site conditions may require adjustment to what is outlined in this brochure. In all cases advice should be sought from a qualified civil engineer.

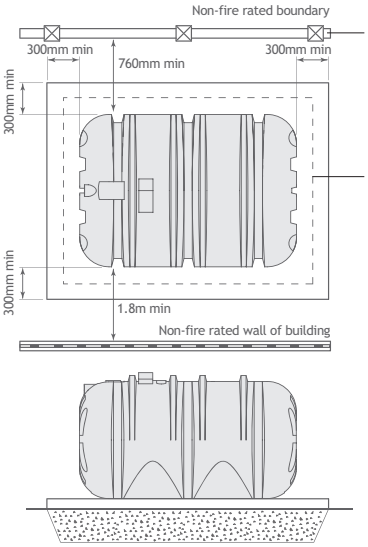
Single skin tanks

A typical single skin fuel oil storage tank installation



Base
100mm thick 1:2:4 concrete mix or 65x215mm precast concrete lintels to BS 5977 or 50mm thick paving slabs

Note: Large tanks require thicker bases. Consult OFTEC or an OFTEC registered engineer for advice.



Fire Prevention Clearances
Tank to be installed in accordance with the requirements of BS5410 and simplified in OFTEC document TI14.

Expansion Clearance
Tank must be installed with clearance of 150mm all round to allow for expansion when full of fuel.

Tank Support Base
Base must fully support the tank with no overhangs or gaps.

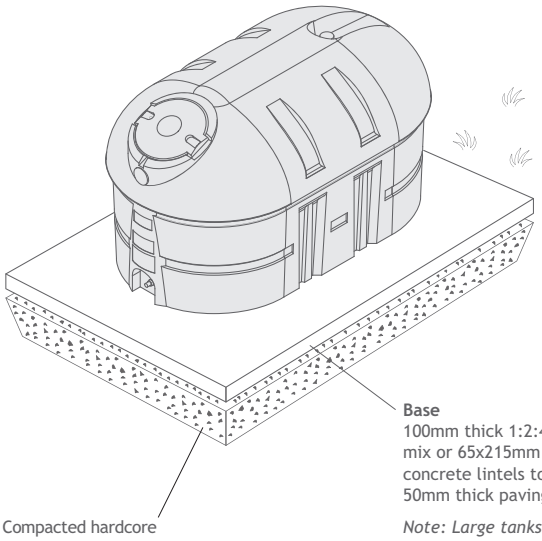
Tanks providing fuel oil to domestic users (single family dwellings with a capacity of less than 3500ltrs) must comply with the requirements of OFTEC Technical Book 3: Section 2.7. An OFTEC registered engineer can provide full details.

- Position the tank ensuring best access for filling, maintenance and safety
- Ensure that the tank support structure is suitable for the long term support of a tank when full. If in doubt seek the advice of an engineer
- Store in an upright position, support the entire base of the tank on a firm, flat, level surface ensuring that the area is free from any sharp stones or other debris
- Leave sufficient space between the tank and any surrounding structures to allow for any expansion during filling. We recommend a minimum of 300mm (12”) all round. Also allow space above the tank for any hinged access covers to fully open
- nsure the tank is protected from strong wind (especially when empty). If necessary strap it down. Be careful not to induce too much force when tying down as to distort product shape
- Connect all pipework, fittings and accessories. The tank and the integrity of seals could be affected if pipework and fittings are not sufficiently supported
- Use PTFE tape or Stag compound for jointing
- Do not exceed the maximum torque rating for your outlet fitting:
  - Standard 1” BSP (female) outlet fitting 61Nm (45 lb/ft)
  - Special Order 1.5” & 2” BSP female outlet fittings - 67Nm (50 lb/ft)

Installation *continued...*

Bunded tanks

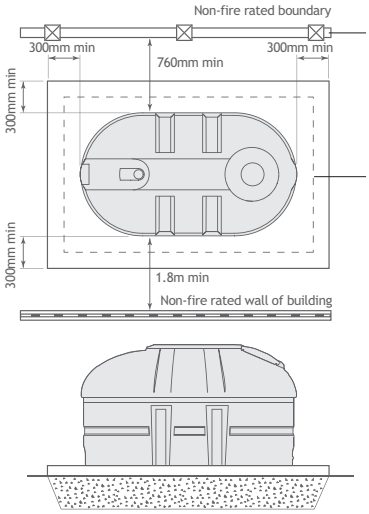
A typical bunded fuel oil storage tank installation



Compacted hardcore

Base
100mm thick 1:2:4 concrete mix or 65x215mm precast concrete lintels to BS 5977 or 50mm thick paving slabs

Note: Large tanks require thicker bases. Consult OFTEC or an OFTEC registered engineer for advice.



Fire Prevention Clearances
Tank to be installed in accordance with the requirements of BS5410 and simplified in OFTEC document TI14.

Expansion Clearance
Tank must be installed with clearance of 150mm all round to allow for expansion when full of fuel.

Tank Support Base Maintenance Clearances
Bunded tanks need a clearance of 600mm all round to allow possible inspection of inner tank by removal of outer bund top cover.

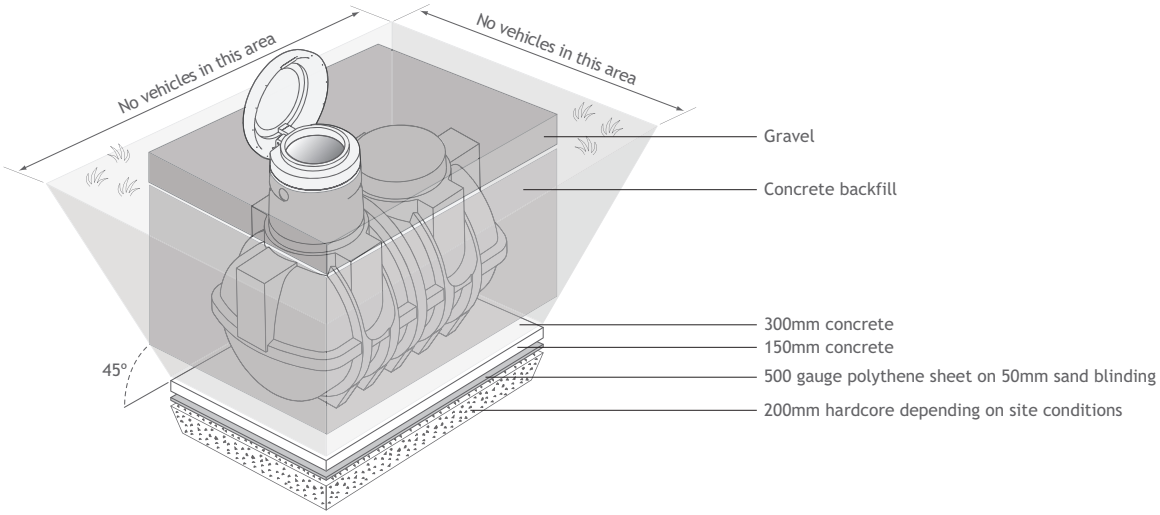
Tank Support Base
Base must fully support the tank with no overhangs or gaps.

Tanks providing fuel oil to domestic users (single family dwellings with a capacity of less than 3500ltrs) must comply with the requirements of OFTEC Technical Book 3: Section 2.7. An OFTEC registered engineer can provide full details.

- Store in an upright position, support the entire base of the tank on a firm, flat, level surface ensuring that the area is free from any sharp stones or other debris
- The tank must be adequately separated from any surrounding structures (HSE guidelines suggest 4m). The separation between other tanks should be the minimum needed for safe construction and operation. We recommend a minimum of 300mm (12”) all round. Also allow space above the tank for the hinged access cover to fully open
- Position the tank ensuring best access for filling, maintenance and safety
- Ensure the tank is protected from strong wind (especially when empty). If necessary strap it down. Be careful not to induce too much force when tying down as to distort product shape
- Connect all pipework, fittings, accessories and support structures
- The tank and the integrity of seals could be affected if pipework and fittings are not suitably supported
- Use PTFE tape or Stag compound for jointing
- Do not allow factory fitted outlets to become loose or turn during fitting of accessories or fuel supply pipes. The 1” BSP bottom outlet fitting (where applicable) is set at an optimum torque (45 lb/ft, 61Nm) for O-ring seals on the outer tank wall
- If gravity feed is not suitable for your application see your authorised distributor for information on pumps
- Clearly label the tank to identify the contents and any relevant safety information

Underground tanks

A typical underground fuel oil storage tank installation



Location of tank

All underground tanks MUST be buried in concrete.

Superimposed loads, such as vehicles, should NOT be allowed within the protection area shown in the following illustration (minimum 2m from the outer edge of the tank). The area should be fenced or clearly marked to restrict access.

If this cannot be followed a reinforced concrete slab must be designed/installed by a qualified civil/structural engineer so that no loads are transmitted directly on to the tank.

The standard installation depth of 500mm, to the top of the tank body, **MUST NOT** be exceeded.

Installation

It is recommended that a full risk assessment be completed on the site, installation process and all parts prior to installation. None of these tanks can be installed in wet ground conditions (where at any time the ground water may rise above the base of the tank).

- The excavation should allow for a minimum of 250mm all round the tank and approximately 500mm below the tank for hard core and concrete
- Allow for suitable pumps to keep the excavation dry until the installation is complete
- Fit suitable planking and strutting as necessary
- Lay: A) 200mm thick hard core (or as necessary for site conditions)
  B) 50mm sand blinding
  C) 500 gauge polythene sheet over the base of the excavation
- If necessary set temporary shuttering to contain the concrete surround
- Lay a wet bed of concrete 150mm thick (strength 20N/mm^2, slump test 50mm)
- Lower tank carefully onto the concrete. Check that the tank is true and level
- Haunch concrete 300mm up around base of tank
- Back filling;
  A) Back fill evenly all around the tank with concrete (minimum 15 N/mm^2) proceeding in 150mm layers. It is vital to ensure that the tank is filled with water 300-500mm ahead of the concrete back fill, then emptied of all water and refilled with the intended liquid to be stored
  B) Alternatively the concrete can be placed around an empty tank in four progressive lifts with a 12 hour delay between each lift to limit the concrete pressure. The tank will have to be carefully restrained by temporary strutting to prevent any chance of flotation during this process

  Ensure that there are no voids or areas of differing pressure around the tank
- Do not use a vibrating poker
- Complete concrete backfill to 200mm below tank lid
- Finish to ground level with 12-15mm gravel or earth
- Ensure that the tank lid is a minimum of 150mm above ground and is situated in an area where ground water will not lie
- Ensure that the tank lid has the ability to hinge open to 90°
- Ensure that all holes placed in the tank neck for fuel outlet pipes are sealed (eg with a suitable flexible grommet) to prevent ingress of water

Industry regulations

Current oil storage regulations apply to all new installations in the UK (domestic, agricultural, commercial and industrial).

The regulations are comprehensive but they are not complicated.

Oil is the most common form of pollutant in the UK, accounting for almost one quarter of all incidents. The guidelines prepared by the UK and Ireland environment agencies are intended to help reduce pollution caused by inadequate storage of oil in above ground fuel oil tank installations.

Regulations are covered by the Control of Pollution (Oil Storage) (England) Regulations 2001 or the Water Environment (Oil Storage) (Scotland) Regulations 2006. Wales and Northern Ireland are exempt but other specific legislation may apply.

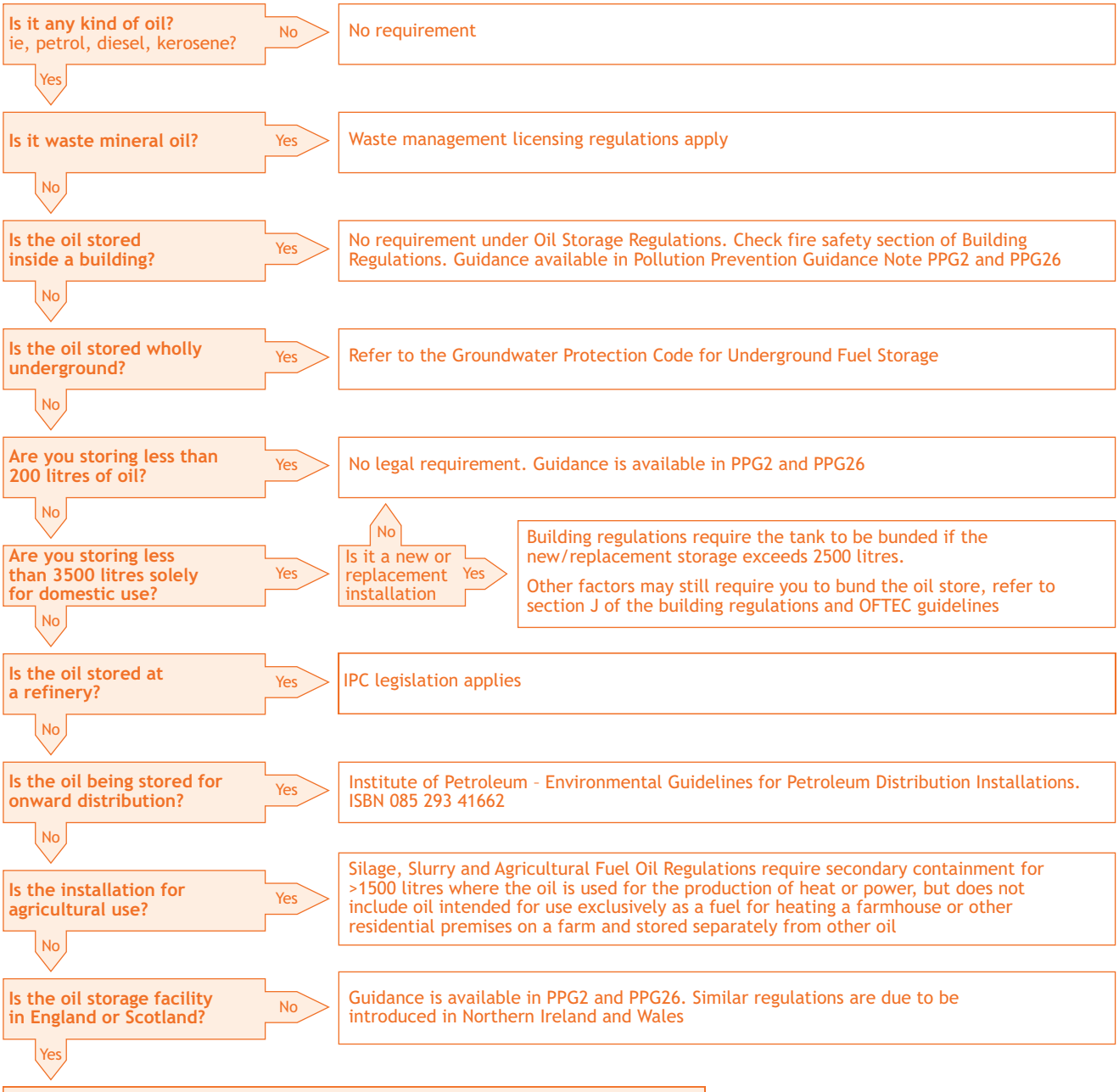
Many drains lead directly to rivers, streams or lakes. If oil is allowed to enter these drains, it has the same effect as pouring it directly into the watercourse.

Oil is poisonous to fish and other wildlife and it overwhelms plant life. Just two litres of oil could pollute the volume of fresh water needed to fill an olympic-size swimming pool and make it completely undrinkable.

An environmental regulator can serve an 'anti pollution works notice' if a site gives rise to, or is at risk of giving rise to, pollution of surface waters or groundwater. This notice will require the site owner to undertake remedial action.

Site owners can be prosecuted and fined if oil from the site enters the ground or watercourses. Site owners may also incur substantial clean-up costs.

Oil storage regulation relevance chart


Is it any kind of oil? ie, petrol, diesel, kerosene?
No
No requirement
Yes
Is it waste mineral oil?
Yes
Waste management licensing regulations apply
No
Is the oil stored inside a building?
Yes
No requirement under Oil Storage Regulations. Check fire safety section of Building Regulations. Guidance available in Pollution Prevention Guidance Note PPG2 and PPG26
No
Is the oil stored wholly underground?
Yes
Refer to the Groundwater Protection Code for Underground Fuel Storage
No
Are you storing less than 200 litres of oil?
Yes
No legal requirement. Guidance is available in PPG2 and PPG26
No
Are you storing less than 3500 litres solely for domestic use?
Yes
No
Is it a new or replacement installation
Yes
Building regulations require the tank to be bunded if the new/replacement storage exceeds 2500 litres.
Other factors may still require you to bund the oil store, refer to section J of the building regulations and OFTEC guidelines
No
Is the oil stored at a refinery?
Yes
IPC legislation applies
No
Is the oil being stored for onward distribution?
Yes
Institute of Petroleum - Environmental Guidelines for Petroleum Distribution Installations. ISBN 085 293 41662
No
Is the installation for agricultural use?
Yes
Silage, Slurry and Agricultural Fuel Oil Regulations require secondary containment for >1500 litres where the oil is used for the production of heat or power, but does not include oil intended for use exclusively as a fuel for heating a farmhouse or other residential premises on a farm and stored separately from other oil
No
Is the oil storage facility in England or Scotland?
No
Guidance is available in PPG2 and PPG26. Similar regulations are due to be introduced in Northern Ireland and Wales
Yes
The Control of Pollution (Oil Storage) (England) Regulations 2001 apply
or
The Water Environment (Oil Storage) (Scotland) Regulations 2006 apply

Source: Environment Agency

Relevant Pollution Prevention Guidelines (PPG)

- PPG2: Above ground oil storage tanks
- PPG8: Safe storage and disposal of used oils
- PPG26: Storage and handling of drums and intermediate bulk containers (IBCs)
- PPG27: Installation, decommissioning and removal of underground storage tanks

Guidance

- CIRIA/Environment Agency Joint Guidance: Concrete bunds for oil storage tanks
- CIRIA/Environment Agency Joint Guidance: Masonry bunds for oil storage tanks
- Environment Agency: Frequently asked questions on the Control of Pollution (Oil Storage) (England) Regulations 2001
- Scottish Executive: Guidance Note for the Water Environment (Oil Storage) Scotland Regulations 2006
- SEPA: Frequently Asked Questions on the Water Environment (Oil Storage) Scotland Regulations 2006

Oil Care Campaign

The Oil Care Campaign encourages good practice to help prevent oil pollution. They produce guidance and informative material, organise events and promote the Oil Care Code and the Oil Bank Information Line. Visit www.oilbankline.org.uk.

Other Requirements

It is important that oil storage tanks are inspected annually.

Environment Agency regulations also state that all oil tanks should be labelled with information on how to respond to a leak.

Section 7 of the PPG26 pollution prevention guidelines states “Spill kits containing materials such as oil or chemical absorbents and personal protective clothing should be on site”.

If you are in any doubt about any of the oil storage regulations and legislation, Balmoral Tanks’ sales staff will be pleased to answer any questions you may have and provide assistance when specifying a fuel oil storage tank.

Overall requirements are specified in the following legislation:

- Control of Pollution (Oil Storage)(England) Regulations:2001
- Water Environment (Oil Storage)(Scotland) Regulations April 2006
- Control of Pollution (Silage, Slurry & Agricultural Fuel Oil) Regulations:1991

Fuel oil tanks supplying domestic properties must comply with:

- Building Regulations (England & Wales) 2010:AD”J”
- Scottish Building Standards (Domestic) Technical Handbook
- Building Regulations Northern Ireland Technical Booklet L:2006
- Building Regulations: Part J (Ireland)
- BS5410 - Code of Practice for Oil Fired Systems: Part 1 or Part 2 (UK and Ireland)

AGRICULTURAL, COMMERCIAL AND INDUSTRIAL APPLICATIONS

Bunded tanks

Superfill™ integrated fuelling stations

SuperBlue™ AdBlue™ storage and dispensing stations

Bunded waste oil tanks

Single skin tanks

AGRICULTURAL, COMMERCIAL AND INDUSTRIAL APPLICATIONS

Balmoral Tanks is committed to the safe storage of fuel oil and has made substantial investment in its bunded tank products to provide a wide range of vertical, horizontal and waste oil storage tanks.

The company also manufactures a choice of Superfill™ and SuperBlue™ integrated storage and dispensing stations.

Ranging in capacities from 500-10,000 litres, Superfill tanks and fuel delivery systems are designed to store and deliver agricultural fuel oil (A2) and diesel (D) to BS2869, and up to 7% mixture biofuel to BSEN14214 standards.

Bunded tanks are designed to store all of the above as well as kerosene (C1, C2) to BS2869. Bunded waste oil tanks provide safe storage and disposal of waste oil, fuels and other liquid products at a variety of sites including garages, civic amenity sites, landfill sites and harbours.

Balmoral SuperBlue™ storage and dispensing units are designed to store AdBlue™ (AUS32) while single skin tanks can store heating oils, diesel, kerosene to BS2869 and up to 7% mixture biofuel to BSEN14213, BSEN14214.

All Balmoral bunded tanks contain 110% of the inner tank volume and meet the requirements of:

- Control of Pollution (Oil Storage)(England) Regulations:2001
- Water Environment (Oil Storage)(Scotland) Regulations April 2006
- Control of Pollution (Silage, Slurry & Agricultural Fuel Oil) Regulations: 1991

Bunded tank design features

- The bund contains a minimum 110% volume of the inner tank
- 'Tank within a tank' construction offers integral protection from leakage and overfilling
- Electronic fuel gauge fitted as standard to all bunded tanks and Superfill tanks
- Mechanical overfill prevention device
- Designed for use as integral unit
- Covered bund prevents collection of rainwater
- Lockable hinged cover on outer tank or cabinet allowing access to standard fittings
- Made from recyclable polyethylene
- Corrosion resistant
- UV stabilised
- Cost effective

Bunded tanks page 20

Balmoral Superfill™ page 28

Balmoral SuperBlue™ page 32

Waste oil tanks page 36

Single skin tanks page 38

BUNDED TANKS

For agricultural, commercial and industrial applications

A bund is a structure which surrounds a tank. It is designed to contain any accidental leakage or spillage of the contents, thus preventing pollution of the environment. A traditional bund, sometimes known as a catchpit, is usually constructed of rendered brick or blockwork and is separate from the tank.

A Balmoral bunded tank is an integral combination of a fuel oil tank and a bund (tank within a tank). Both the inner and outer tanks are manufactured from rotationally moulded polyethylene. The product avoids the need to construct a traditional brick built bund, provides a compact installation and, being enclosed, eliminates the need to dispose of accumulated rainwater and debris and minimises the risk of a 'jetting' type of leakage from a punctured tank raised above the walls of a traditional style of bund.

All bunds must fulfil the following requirements:

- must not have a drain outlet
- must be completely impermeable to liquids
- must contain all fuel supply/filling accessories within the catchment area
- must contain 110% of the capacity of a single tank installation

Balmoral bunded tanks are designed for static applications (not for transport purposes) and are heavy when full. They should only be moved, with care, when completely empty.

We advise all Balmoral bund installations to be inspected regularly, eg once a year or before filling. Any liquid overspill contained within the outer bund 'catchpit area' must be removed to prevent reaching the overflow level and to avoid buoyancy of the inner tank.

Parts supplied as standard:

- Either a factory fitted 1"BSP (male) bottom offtake connection or a 10mm compression fitting for top offtake
- This fitting provides an offtake suitable for gravity feed situations whilst maintaining an essential seal of the inner and outer tanks
- 2" BSP (male) fill point with cap
- 105mm diameter (4") aperture with flush fitting cover for desludging and inspection of inner tank
- Lockable hinged manhole cover on outer tank
- Mechanical overfill prevention valve
- Electronic contents gauge

Horizontal bunded tank options

Top fill/bottom offtake (Figure 1)

Recommended combination of outlet accessories on bottom offtake bunded tank.

Agricultural applications
A bottom offtake bunded tank with an external (outside the bund) flexible fuel supply hose and fittings may not be approved by the EA or SEPA. A possible exception to this may be a permanently attached rigid pipe outlet to an appliance such as a grain dryer. It is recommended that customers obtain advice from a representative of the relevant authorities before installation.

Top fill/top offtake (Figure 2)

This option has been primarily designed for domestic heating applications where bottom offtake bunded tanks, in some cases, may not be permitted.

Supplied as standard with the following:

- A factory fitted 10mm brass compression fitting with internal copper extractor tube. This fitting provides an offtake suitable for most domestic fuel oil installations and provides enhanced environmental protection by avoiding low-level penetration through bund. A suitable pump to extract the tank contents and a non return valve on the pipeline may be required. A hole should be drilled in the top of the tank (see Figure 2) for the fuel supply pipe. Check that there are no air leaks in the pipeline once assembled
- 2” BSP (male) fill point with cap
- 105mm diameter (4”) aperture with flush fitting cover
- Lockable hinged manhole cover on outer tank

Agricultural applications

A top offtake bunded tank may be approved providing all fittings and accessories are contained within the bund. We cannot advise if this is practical to individual site installations - however the standard 10mm compression fitting and internal extraction tube provided for top empty will be unsuitable for connecting to a standard type of flexible fuel delivery hose and nozzle for dispensing diesel (the tank components are removable for conversion purposes). A suitable pump will be required to extract the tank contents as this tank option does not provide the assistance of gravity feed supply. Contact the Balmoral Tanks sales office for information on the range and suitability of pumps.

Figure 1: Top fill/bottom offtake

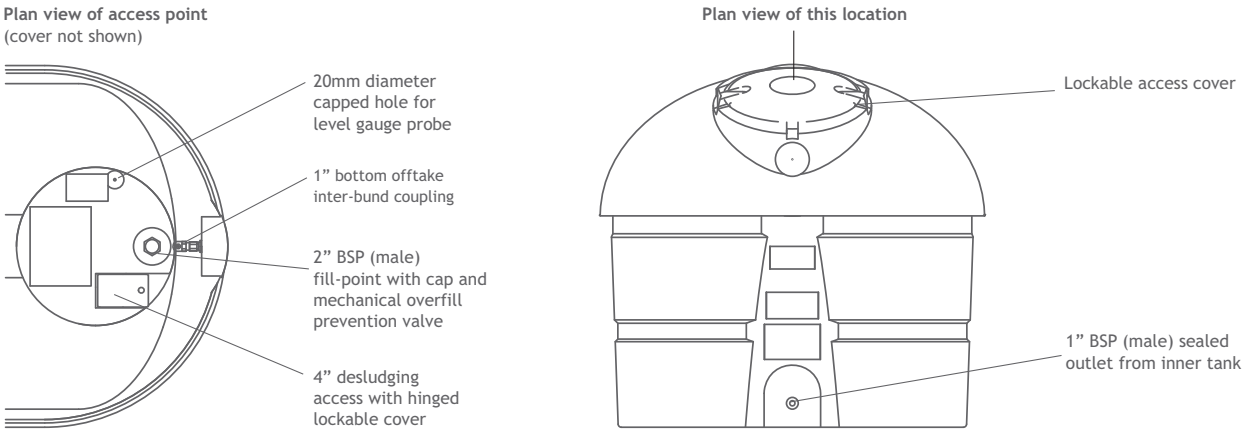
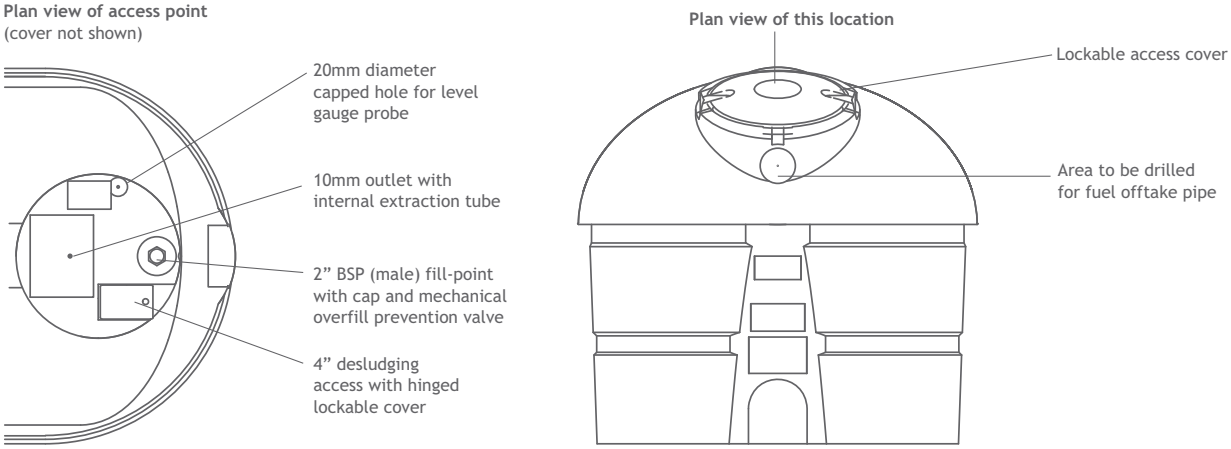

Plan view of access point
(cover not shown)
20mm diameter capped hole for level gauge probe
1” bottom offtake inter-bund coupling
2” BSP (male) fill-point with cap and mechanical overfill prevention valve
4” desludging access with hinged lockable cover
Plan view of this location
Lockable access cover
1” BSP (male) sealed outlet from inner tank

Figure 2: Top fill/top offtake


Plan view of access point
(cover not shown)
20mm diameter capped hole for level gauge probe
10mm outlet with internal extraction tube
2” BSP (male) fill-point with cap and mechanical overfill prevention valve
4” desludging access with hinged lockable cover
Plan view of this location
Lockable access cover
Area to be drilled for fuel offtake pipe

Vertical bunded tank options

Vertical bunded tank

Bottom empty
The tank uses a 1” BSP (male) connection. It is supplied with a connection kit which includes a valve, filter bowl and adapter. These items are to be fitted by the installer. Ensure the valve remains closed unless required.

The bottom empty lock-nuts are factory fitted to a pre-set torque and must not be tampered with.

Top empty
On the 5000, 7500 and 10,000 litre models, access to the top empty outlet is by way of a manway on top of the bund. On the 2500 litre model, access to the top empty outlet is through the front door. A 10mm copper tube rises through the inner tank and terminates with a bulkhead fitting at the top of the tank.

An offtake pipe can be attached and run off to the installation as required.

Any pipeline from this must run through the bund lid.

It is recommended that a bulkhead fitting is used to maintain a watertight seal into the bund

Electronic contents gauge
An electronic contents gauge is supplied with this product.

Filling the tank
Vertical bunded tanks are filled through the manway hatch on top of the tank directly into the 2” BSP filling point. This has a mechanical overfill prevention valve (OPV). The OPV limits are indicated on a label fixed to the side of the tank.

Safe access must be provided to the top of the bund and through the manway hatch.

Vertical bunded tank with cabinet (Figure 3)
(including integral cabinet on VB2500)

Bottom empty
The tank uses a 1” BSP (male) connection. It is supplied with a connection kit which includes a valve, filter bowl and adapter. These items are to be fitted by the installer. Ensure the valve remains closed unless required.

The bottom empty lock-nuts are factory fitted to a pre-set torque and must not be tampered with.

Top empty
On the 5000, 7500 and 10,000 litre models, access to the top empty outlet is by way of a manway on top of the bund. On the 2500 litre model, access to the top empty outlet is through the front door. A 10mm copper tube rises through the inner tank and terminates with a bulkhead fitting at the top of the tank.

An offtake pipe can be attached and run off to the installation as required.

Any pipeline from this must run through the bund lid.

Electronic contents gauge
An electronic contents gauge is supplied with this product.

Filling the tank
The vertical bunded tank with cabinet can be filled from ground level through a 2"BSP filling port. On the 5000, 7500 and 10,000 litre models, this has a non-return valve to minimise drips when uncoupling after filling.

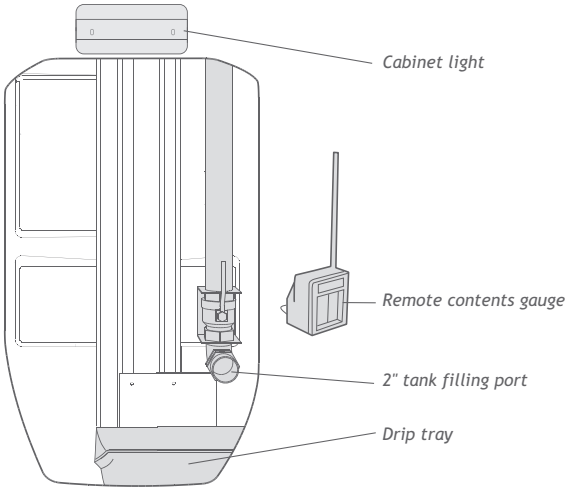
On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is also included for additional safety.

The fill line has a mechanical overfill prevention valve (OPV). The OPV limits are indicated on a label fixed inside the cabinet door.

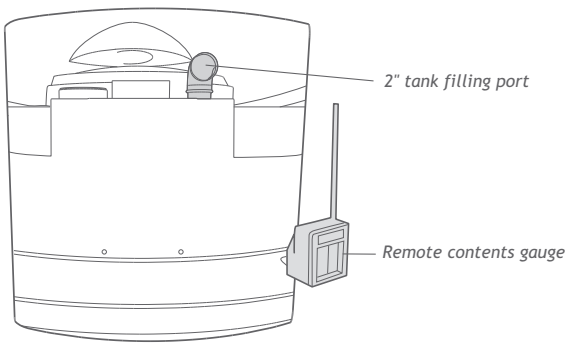
On the 5000, 7500 and 10,000 litre models, a removable drip tray is provided which catches drips from the 2" fill port. Please dispose of contents responsibly.

Figure 3: Cabinet contents

5000, 7500 and 10000 litre models



2500 litre models



HORIZONTAL BUNDED TANK RANGE

HB1135 Horizontal fuel tank

Capacity (Litres)	1135
Length (mm)	2265
Width (mm)	1375
Height (mm)	1435
Top empty product code	BBND-HB1135-TE
Bottom empty product code	BBND-HB1135-BE

HB1590 Horizontal fuel tank

Capacity (Litres)	1590
Length (mm)	2265
Width (mm)	1375
Height (mm)	1435
Top empty product code	BBND-HB1590-TE
Bottom empty product code	BBND-HB1590-BE

HB2500 Horizontal fuel tank

Capacity (Litres)	2500
Length (mm)	2900
Width (mm)	1700
Height (mm)	1605
Top empty product code	BBND-HB2500-TE
Bottom empty product code	BBND-HB2500-BE

HB3500 Horizontal fuel tank

Capacity (Litres)	3500
Length (mm)	3150
Width (mm)	1980
Height (mm)	1765
Top empty product code	BBND-HB3500-TE
Bottom empty product code	BBND-HB3500-BE

VERTICAL BUNDED TANK RANGE

VB500 Vertical fuel tank

Capacity (Litres)	500
Length (mm)	1200
Width (mm)	1200
Height (mm)	1440
Top empty product code	BBND-VB500-TE
Bottom empty product code	BBND-VB500-BE

VB1300 Vertical fuel tank

Capacity (Litres)	1300
Length (mm)	1720
Width (mm)	1720
Height (mm)	1580
Top empty product code	BBND-VB1300-TE
Bottom empty product code	BBND-VB1300-BE

VB2500 Vertical fuel tank

Capacity (Litres)	2500
Length (mm)	2100
Width (mm)	1800
Height (mm)	2215
Top empty product code	BBND-VB2500-NG-TE
Bottom empty product code	BBND-VB2500-NG-BE

VERTICAL BUNDED TANK RANGE

VB5000 Vertical fuel tank

Capacity (Litres)	5000
Length (mm)	2230
Width (mm)	2005
Height (mm)	2885
Top empty product code	BBND-VB5000-NG-TE
Bottom empty product code	BBND-VB5000-NG-BE

VB7500 Vertical fuel tank

Capacity (Litres)	7500
Length (mm)	2550
Width (mm)	2305
Height (mm)	3020
Top empty product code	BBND-VB7500-NG-TE
Bottom empty product code	BBND-VB7500-NG-BE

VB10000 Vertical fuel tank

Capacity (Litres)	10000
Length (mm)	2755
Width (mm)	2510
Height (mm)	3150
Top empty product code	BBND-VB10000-NG-TE
Bottom empty product code	BBND-VB10000-NG-BE

VERTICAL BUNDED TANK WITH CABINET

VB5000 Vertical fuel tank with cabinet

Capacity (Litres)	5000
Length (mm)	2795
Width (mm)	2005
Height (mm)	2885
Top empty product code	BBND-VB5000-NG-TE-WC
Bottom empty product code	BBND-VB5000-NG-BE-WC

VB7500 Vertical fuel tank with cabinet

Capacity (Litres)	7500
Length (mm)	3115
Width (mm)	2305
Height (mm)	3020
Top empty product code	BBND-VB7500-NG-TE-WC
Bottom empty product code	BBND-VB7500-NG-BE-WC

VB10000 Vertical fuel tank with cabinet

Capacity (Litres)	10000
Length (mm)	3320
Width (mm)	2510
Height (mm)	3150
Top empty product code	BBND-VB10000-NG-TE-WC
Bottom empty product code	BBND-VB10000-NG-BE-WC

BALMORAL SUPERFILL™

Fuel oil storage and dispensing

Superfill tanks and fuel delivery systems are designed to store and deliver fuel oil (A2) and diesel (D) to BS2869, and up to 7% mixture biofuel to BSEN14214 standards.

Regulations and guidelines

The following regulations and guidelines are applicable to the installation and maintenance of fuel delivery stations and fuel oil tanks and are available from their respective authorities:

- British Standards: BS5410-1/2
- Environment Agency: PPG2
- Scottish Environmental Protection Agency: PPG2
- OFTEC: TI/131, TI/136, T19, T32, T14
- Control of Pollution (oil storage) (England) Regulations 2001
- Water Environment (oil storage) (Scotland) Regulations 2006
- Groundwater Regulations 1998
- Local Building Regulations may also cover the site preparation and installation of integrally bunded tanks.

Electrics

There is a double pole isolator switch mounted on the pump plate inside the cabinet for connection to a mains power source.

Filling the Superfill

Superfills can be filled from ground level through a 2"BSP filling port. The 5000, 7500 and 10,000 litre models have a non-return valve to minimise drips when uncoupling after filling. (A non-return valve is not required on the HB1135, HB2500, HB3500, VB1300 and VB2500 models).

On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is included for additional safety.

The Superfill's fill line has a mechanical overfill prevention valve (OPV). The OPV limits are indicated on a label fixed inside the cabinet door.

CAUTION

THIS TANK HAS AN OVERFILL PREVENTION VALVE FITTED.

Min Flow Rate 50 LPM
Max Flow Rate 580 LPM
Min Pressure 0.15psi / 10mBAR
Max Pressure 100psi / 7BAR
Drainage of line 20-30 SEC'S PER M

Superfill tank features

- Suitable for commercial, industrial and agricultural applications
- Horizontal and vertical models
- Refuelling components easily accessible from ground level
- Mechanical overfill prevention valve
- Capacity measurement options
- Self contained lockable cabinet provides additional storage of 'incidentals'
- Cabinet mounted lamp
- Full reach 4 or 6m delivery hose - dependent on model
- Integral lifting points
- Ultra compact sizes

All Superfill tanks are supplied with a 240V pump with nozzle, holder, hose, non-return valve, remote level gauge, bund alarm and 2”BSP connection with cap and chain. (A non-return valve is not required on the HB1135, HB2500, HB3500, VB1300 and VB2500 models).

Vertical 2500, 5000, 7500 and 10,000 litre models are supplied with 6m hose, cabinet light and cabinet mounted analogue flowmeter.

Horizontal 1135, 2500, 3500 and vertical 1300 litre models are supplied with 4m hose.

Superfill tanks are not suitable for the storage of kerosene (paraffin) unless an appropriate IP rated pump is fitted.

Monitoring the Superfill contents

Electronic contents gauge
Balmoral Superfills are supplied with an electronic level monitoring gauge. The measurement reader is situated within the bund, on top of the inner tank, and has a leak detection device within the bund cavity. The display unit is connected to a standard 3-pin socket in house/premises.

This system is pre-set at the factory and, once activated, will display the tank contents in 1/10th's, and will also display a warning in the event of a spill or leak into the bund cavity.

Analogue flow meter
The analogue meter on the fuel delivery system has two readings:

i 3-digit batch total which can be reset
ii 6-digit totaliser which cannot be reset

Fuel dispensing

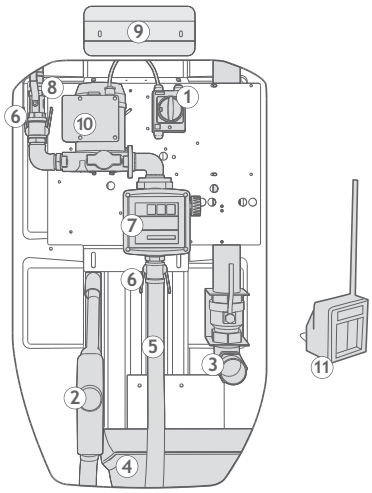
The Superfill is provided with four or six metres of delivery hose as standard with a trigger-activated nozzle.

With the delivery system switched on, fuel delivery is activated by pulling the trigger on the nozzle. Once fuel is delivered the nozzle is replaced in the holster when not in use.

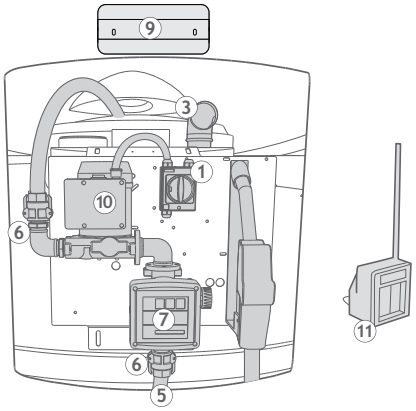
On the 5000, 7500 and 10,000 litre models, a removable drip tray is provided which catches drips from the 2" fill port.

Figure 4: Superfill™ cabinet contents

5000, 7500 and 10,000 litre models



2500 litre models



Key

1 *Double pole isolator switch*
2 *Nozzle*
3 *2" tank filling port with dry break coupling*
4 *Drip tray*
5 *1" delivery line*
6 *Quick release couplings*
7 *Analogue flow meter*
8 *1" Valve (Available on 5000, 7500 and 10,000L models)*
9 *Cabinet lamp (Available on vertical 2500, 5000, 7500 and 10,000L models)*
10 *Fuel pump*
11 *Remote contents gauge*

HORIZONTAL SUPERFILL TANK RANGE

SF1135 Horizontal Superfill™

Capacity (Litres)	1135
Length (mm)	2265
Width (mm)	1375
Height (mm)	1435
Product code	BBND-HB1135-SF

SF1300 Horizontal Superfill™

Capacity (Litres)	1300
Length (mm)	1720
Width (mm)	1720
Height (mm)	1580
Top empty product code	BBND-VB1300-SF

SF2500H Horizontal Superfill™

Capacity (Litres)	2500
Length (mm)	2900
Width (mm)	1700
Height (mm)	1605
Product code	BBND-HB2500-SF

SF3500 Horizontal Superfill™

Capacity (Litres)	3500
Length (mm)	3150
Width (mm)	1980
Height (mm)	1765
Product code	BBND-HB3500-SF

VERTICAL SUPERFILL TANK RANGE

SF2500 Vertical Superfill™

Capacity (Litres)	2500
Length (mm)	2100
Width (mm)	1800
Height (mm)	2215
Product code	BBND-VB2500-NG-SF-FM

SF5000 Vertical Superfill™

Capacity (Litres)	5000
Length (mm)	2795
Width (mm)	2005
Height (mm)	2885
Product code	BBND-VB5000-NG-SF-FM

SF7500 Vertical Superfill™

Capacity (Litres)	7500
Length (mm)	3115
Width (mm)	2305
Height (mm)	3020
Product code	BBND-VB7500-NG-SF-FM

SF10000 Vertical Superfill™

Capacity (Litres)	10000
Length (mm)	3320
Width (mm)	2510
Height (mm)	3150
Product code	BBND-VB10000-NG-SF-FM

BALMORAL SUPERBLUE™

AdBlue™ storage and dispensing

What is AdBlue™ ?

A registered trademark for AUS32, AdBlue is a solution of high purity urea in demineralised water and is used as an operating fluid in diesel-powered trucks that are fitted with Selective Catalytic Reduction (SCR) equipment to reduce emissions. SCR engines convert harmful exhaust gases into less destructive substances. AdBlue is neither explosive nor harmful to the environment and is classified under the minimum-risk category of transportable fluids.

AdBlue is not a fuel additive. It is stored separately from the vehicle's diesel and is fed into the exhaust system.

On average, AdBlue is consumed at approximately 3-5% by volume of diesel usage.

The Balmoral SuperBlue™

Meeting the requirements of both commercial and retail outlets, Balmoral Tanks provides a range of fully integrated AdBlue dispensing stations from 500-10,000 litre capacity and, uniquely, a selection of forecourt models up to 10,000 litres in size.

The fully lockable Balmoral SuperBlue requires minimal maintenance and is corrosion resistant. The tanks are fully bunded providing total protection from leakage and can be customised to client specification.

Forecourt model
Designed to receive and store AdBlue where dispensing and metering is carried out remotely from the tank.

Dispensing model
Where applicable, the cabinet on dispensing models is loaded with features including an integrated light, dispensing hose with stainless steel auto-nozzle, electronic level gauging system, digital flowmeter and dry disconnect coupling on the 2" fill line. Temperature control equipment can be fitted if required.

Regulations and guidelines

There are no specific regulations relating to AdBlue storage, however the Environment Agency has published information on storing and using AdBlue and have powers under the Anti-Pollution Works Regulations to enforce their good practice guidance if they believe there is a significant environmental risk from user activities.

The Balmoral SuperBlue range meets the requirements of the Environment Agency good practice guidance, but users should ensure that they satisfy the following requirements:

- Ensure the dispensing area drainage is isolated from surface water drains
- Keep and maintain an appropriate spill kit in case of spillage
- Make an emergency plan and carry out suitable training for dealing with spillages or other accidents

Balmoral SuperBlue tank features

	Dispensing model	Forecourt model
Robust and leak-safe tank-in-tank construction	•	•
240V 70LPM stainless steel pump	•	
Dispensing hose (6m hose on >2500L, 4m hose ≤2500L)	•	
Easy to use automatic stainless steel nozzle	•	
Convenient cabinet light on vertical models	•	
Isolator safety switch	•	
2" industry standard dry-break fill point connection	•	•
2" bottom empty outlet	Optional	•

Optional accessories include:

- Dispensing hose quick release coupling
- Capacity measurement
- Three-channel alarm panel (high/low/bund)
- Heating/insulation packages
- Automatic dispensing model with magnetic adaptor

SuperBlue™ dispensing models

Electrics
There is a double pole isolator switch mounted on the pump plate inside the cabinet for connection to a mains power source.

Filling the SuperBlue
SuperBlue tanks can be filled from ground level through a 2" dry break filling port.

On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is included for additional safety.

Electronic contents gauge
Balmoral SuperBlue tanks are supplied with an electronic level monitoring gauge. The measurement reader is situated within the bund, on top of the inner tank, and has a leak detection device within the bund cavity.

This system is pre-set at the factory and, once activated, will display the tank contents in 1/10th's, and will also display a warning in the event of a spill or leak into the bund cavity.

Digital flow meter
The digital flow meter on the delivery system has two readings:
i 5-digit batch total which can be reset
ii 6-digit totaliser which can be reset

AdBlue dispensing
The Superfill is provided with four or six metres of delivery hose as standard with a trigger-activated nozzle.

With the delivery system switched on, fuel delivery is activated by pulling the trigger on the nozzle. Once fuel is delivered the nozzle is replaced in the holster when not in use.

On the 5000, 7500 and 10,000 litre models, a removable drip tray is provided which catches drips from the 2" fill port.

Pump specifications
Rating: 1~230V, 50Hz
Pumped flowrate: Max 4.2m³/h - 70L/m
Max motor power: 1100W

SuperBlue™ forecourt models

Electronic contents gauge
An electronic contents gauge is supplied with this product.

Filling the SuperBlue
The vertical bunded tank with cabinet can be filled from ground level through a 2" dry break filling port.

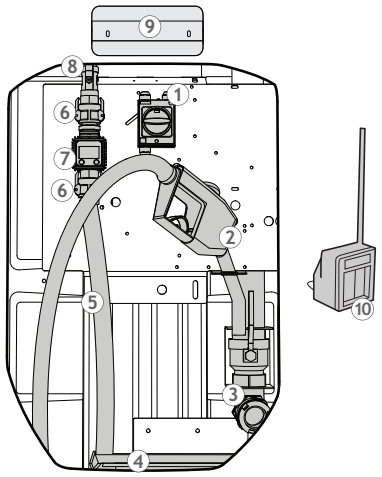
On the 5000, 7500 and 10,000 litre models, a lever-controlled ball valve is also included for additional safety.

On the 5000, 7500 and 10,000 litre models, a removable drip tray (4) is provided which catches drips from the 2" fill port (3). Please dispose of contents responsibly.

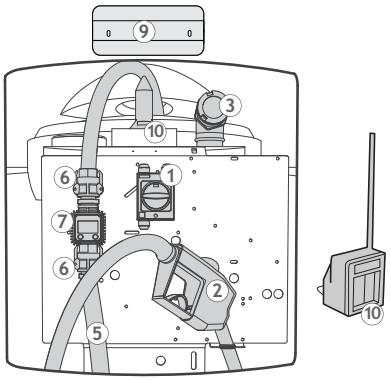
Bottom empty
The tank uses a 2" bottom empty polyethylene BS4504 Pn16 raised face flange connection.

Figure 5: SuperBlue™ cabinet contents

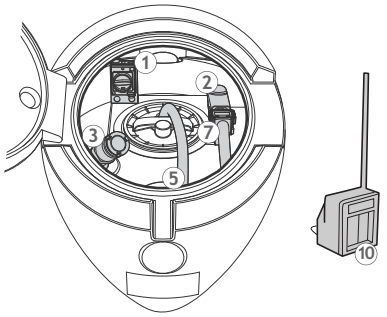
5000, 7500 and 10,000 litre forecourt models



2500 litre vertical forecourt model



500, 1300 and 2500 litre horizontal forecourt model



Key

1 *Double pole isolator switch*
2 *Nozzle*
3 *2" tank filling port with dry break coupling*
4 *Drip tray*
5 *3/4" delivery line*
6 *Quick release couplings*
7 *Digital flow meter*
8 *Valve (Available on 5000, 7500 and 10,000L models)*
9 *Cabinet lamp (Available on vertical 2500, 5000, 7500 and 10,000L models)*
10 *Remote contents gauge*

BALMORAL SUPERBLUE TANK RANGE

SB500 Vertical SuperBlue™

Capacity (Litres)	500
Length (mm)	1200
Width (mm)	1200
Height (mm)	1440
Product code	BBND-SB500-SF-FM

SB1300 Vertical SuperBlue™

Capacity (Litres)	1300
Length (mm)	1720
Width (mm)	1720
Height (mm)	1580
Product code	BBND-SB1300-SF-FM

SB2500H Horizontal SuperBlue™

Capacity (Litres)	2500
Length (mm)	2900
Width (mm)	1700
Height (mm)	1605
Product code	BBND-SB2500-SF-FM

SB2500 Vertical SuperBlue™

Capacity (Litres)	2500
Length (mm)	2100
Width (mm)	1800
Height (mm)	2215
Forecourt model	BBND-SB2500-NG-BE-WC
Dispensing model	BBND-SB2500-NG-SF-FM

SB5000 Vertical SuperBlue™

Capacity (Litres)	5000
Length (mm)	2795
Width (mm)	2005
Height (mm)	2885
Forecourt model	BBND-SB5000-NG-BE-WC
Dispensing model	BBND-SB5000-NG-SF-FM

SB7500 Vertical SuperBlue™

Capacity (Litres)	7500
Length (mm)	3115
Width (mm)	2305
Height (mm)	3020
Forecourt model	BBND-SB7500-NG-BE-WC
Dispensing model	BBND-SB7500-NG-SF-FM

SB10000 Vertical SuperBlue™

Capacity (Litres)	10000
Length (mm)	3320
Width (mm)	2510
Height (mm)	3150
Forecourt model	BBND-SB7500-NG-BE-WC
Dispensing model	BBND-SB7500-NG-SF-FM

BUNDED WASTE OIL TANKS

Safe storage and disposal of waste oil

Complementing its range of bunded fuel oil storage tanks, Balmoral Tanks provides a range of tanks for the safe storage and disposal of waste oil.

The bunded waste oil tank is manufactured with an integral funnel which allows waste oil to be poured directly into the inner tank while avoiding overspill. The waste oil can then be removed and disposed of by an appropriate authority.

Bunded waste oil tanks are suitable for use at a variety of sites including garages, civic amenity sites, landfill sites and harbours.

Ranging in capacities from 500-3500 litres, these tanks can be used to store and dispose of a variety of liquid products such as diesel and up to 7% mixture biofuel (BSEN14213, BSEN14214).

Integral funnel and grill allows waste oil to be poured directly into the inner tank while avoiding overspill

Funnel and grill can be removed allowing access to inner tank

BUNDED WASTE OIL TANK RANGE

WB500 Waste oil tank

Capacity (Litres)	500
Length (mm)	1200
Width (mm)	1200
Height (mm)	1440
Product code	BWOB-VB500

WB1300 Waste oil tank

Capacity (Litres)	1300
Length (mm)	1720
Width (mm)	1720
Height (mm)	1580
Product code	BWOB-VB1300

WB2500 Waste oil tank

Capacity (Litres)	2500
Length (mm)	2900
Width (mm)	1700
Height (mm)	1605
Product code	BWOB-HB2500

WB3500 Waste oil tank

Capacity (Litres)	3500
Length (mm)	3150
Width (mm)	1980
Height (mm)	1765
Product code	BWOB-VB3500

SINGLE SKIN TANKS

For agricultural, commercial and industrial applications

Balmoral storage tanks are rotationally moulded in one piece to provide a seamless unit that is environmentally sensitive and cost effective. These tanks can be used to contain a variety of liquid products such as heating oils, diesel and non-potable water.

Balmoral supplies tanks for standard above ground use as well as underground and bunded tanks for the following sectors:

- Commercial and private businesses
- Agricultural industry
- Road haulage industry

Balmoral's product range has been assessed by key legislative bodies within the UK. High levels of quality are consistently achieved by the use of state-of-the-art manufacturing techniques and recognised European quality control systems.

These tanks can be used to contain a variety of liquid products such as:

- Heating oils
- Diesel
- Kerosene (BS2869)
- Up to 7% mixture biofuel (BSEN14213, BSEN14214)

Single skin tank features

- High impact strength
- Can be installed at ground level using "Tigerloop"
- Manufactured in high quality recyclable polyethylene
- Standard 1" BSP (female) connector outlet
- Ø 2" BSP fill point with cap
- Lightweight and easy to handle
- UV stabilised
- Corrosion resistant
- Fully vented
- Cost effective

All tanks are supplied with air vent, cap and chain.
To comply with Control of Pollution regulations, all standard tanks should be fitted with an overfill prevention device where an air vent cannot be observed whilst filling.

SINGLE SKIN TANK RANGE

V3635 Single skin tank

Capacity (Litres)	3635
Length (mm)	1800
Width (mm)	1800
Height (mm)	1840
Product code	BFUL-V3635

V5455 Single skin tank

Capacity (Litres)	5455
Length (mm)	2000
Width (mm)	2000
Height (mm)	2260
Product code	BFUL-V5455

V7270 Single skin tank

Capacity (Litres)	7270
Length (mm)	2085
Width (mm)	2085
Height (mm)	2510
Product code	BFUL-V7270

V10000 Single skin tank

Capacity (Litres)	10000
Length (mm)	2330
Width (mm)	2330
Height (mm)	2920
Product code	BFUL-V10000

DOMESTIC APPLICATIONS

Bunded tanks

Single skin tanks

Underground tanks

DOMESTIC APPLICATIONS

Balmoral Tanks is committed to the safe storage of fuel oil and has made substantial investment in its bunded tank products to provide a wide range of vertical, horizontal fuel oil storage tanks for domestic applications.

All Balmoral bunded tanks contain 110% of the inner tank volume and meet the requirements of:

- Control of Pollution (Oil Storage)(England) Regulations:2001
- Water Environment (Oil Storage)(Scotland) Regulations April 2006
- Control of Pollution (Silage, Slurry & Agricultural Fuel Oil) Regulations: 1991

Balmoral Tanks offers a range of fuel oil storage tanks for practically every domestic situation.

In areas where a risk to the environment exists, such as near a water course or on a Site of Special Scientific Interest (SSSI) site, bunded tanks should always be specified. Where low environmental risks exist it is generally safe to install a single skinned tank while Balmoral's unique underground storage tanks are ideally suited to premises with limited external space.

In all cases, however, Balmoral Tanks would highly recommend consultation with the local Building Control officer and environmental agency such as the EA/SEPA/NIEA.

Bunded tanks page 44

Single skin tanks page 46

Underground tanks page 50

BUNDED TANKS

For domestic applications

A bund is a structure which surrounds a tank. It is designed to contain any accidental leakage or spillage of the contents, thus preventing pollution of the environment. A traditional bund, sometimes known as a catchpit, is usually constructed of rendered brick or blockwork and is separate from the tank.

A Balmoral bunded tank is an integral combination of a fuel oil tank and a bund (tank within a tank). Both the inner and outer tanks are manufactured from rotationally moulded polyethylene. The product avoids the need to construct a traditional brick built bund, provides a compact installation and, being enclosed, eliminates the need to dispose of accumulated rainwater and debris and minimises the risk of a 'jetting' type of leakage from a punctured tank raised above the walls of a traditional style of bund.

All bunds must fulfil the following requirements:

- must not have a drain outlet
- must be completely impermeable to liquids
- must contain all fuel supply/filling accessories within the catchment area
- must contain 110% of the capacity of a single tank installation

We advise all Balmoral bund installations to be inspected regularly, eg once a year or before filling. Any liquid overspill contained within the outer bund 'catchpit area' must be removed to prevent reaching the overflow level and to avoid buoyancy of the inner tank.

Parts supplied as standard:

- Either a factory fitted 1"BSP (male) bottom offtake connection or a 10mm compression fitting for top offtake
- This fitting provides an offtake suitable for gravity feed situations whilst maintaining an essential seal of the inner and outer tanks
- 2" BSP (male) fill point with cap
- 105mm diameter (4") aperture with flush fitting cover for desludging and inspection of inner tank
- Lockable hinged manhole cover on outer tank
- Mechanical overfill prevention valve
- Electronic contents gauge

Domestic bunded tank options

Top fill/bottom offtake (Figure 1 on page 21)

Recommended combination of outlet accessories on bottom offtake bunded tank.

Top fill/top offtake (Figure 2 on page 21)

This option has been primarily designed for domestic heating applications where bottom offtake bunded tanks, in some cases, may not be permitted.

Supplied as standard with the following:

- A factory fitted 10mm brass compression fitting with internal copper extractor tube. This fitting provides an offtake suitable for most domestic fuel oil installations and provides enhanced environmental protection by avoiding low-level penetrations through the bund. A suitable pump to extract the tank contents and a non return valve on the pipeline may be required. A hole should be drilled in the top of the tank (see Figure 3) for the fuel supply pipe. Check that there are no air leaks in the pipeline once assembled
- 2" BSP (male) fill point with cap
- 105mm diameter (4") aperture with flush fitting cover
- Lockable hinged manhole cover on outer tank

BUNDED TANK RANGE

For domestic applications

Bunded tank features

- The bund contains a minimum 110% volume of the inner tank
- 'Tank within a tank' construction offers integral protection from leakage and overfilling
- Electronic fuel gauge fitted as standard to all bunded tanks and Superfill tanks
- Overfill prevention device
- Designed for use as integral unit
- Covered bund prevents collection of rainwater
- Lockable hinged cover on outer tank or cabinet allowing access to standard fittings
- Made from recyclable polyethylene
- Corrosion resistant
- UV stabilised
- Cost effective

Top Empty supplied with 10mm top offtake, 2"BSP connection, cap and chain, electronic level gauge and bund alarm.

Bottom Empty supplied as Top Empty, but replacing 10mm top offtake with 1" BSP bottom offtake, reducer to 10mm, gate valve and filter pack for 10mm offtake.

HB1135 Bunded tank

Capacity (Litres)	1135
Length (mm)	2265
Width (mm)	1375
Height (mm)	1435
Top empty product code	BBND-HB1135-TE
Bottom empty product code	BBND-HB1135-BE

HB1590 Bunded tank

Capacity (Litres)	1590
Length (mm)	2265
Width (mm)	1375
Height (mm)	1435
Top empty product code	BBND-HB1590-TE
Bottom empty product code	BBND-HB1590-BE

SINGLE SKIN TANKS

For domestic applications

Balmoral single skin fuel oil storage tanks are rotationally moulded in one piece to provide a seamless unit that is environmentally sensitive and cost effective.

Balmoral supplies tanks for standard above ground use as well as underground and bunded tanks for the domestic sector.

Balmoral's product range has been assessed by key legislative bodies within the UK. High levels of quality are consistently achieved by the use of state-of-the-art manufacturing techniques and recognised European quality control systems.

Ranging in capacities from 1250-10,000 litres, these tanks can be used to contain a variety of liquid products such as:

- Heating oils
- Diesel
- Kerosene (BS2869)
- Up to 7% mixture biofuel (BSEN14213)

Single skin tank features

- High impact strength
- Can be installed at ground level using "Tigerloop"
- Manufactured in high quality recyclable polyethylene
- Standard 1" BSP female connector outlet
- Ø 2" BSP fill point with cap
- Easily reached filler point
- Lightweight and easy to handle
- UV stabilised
- Corrosion resistant
- Fully vented
- Cost effective

All tanks are supplied with air vent, cap and chain.
To comply with Control of Pollution regulations, all standard tanks should be fitted with an overfill prevention device where an air vent cannot be observed whilst filling.

SINGLE SKIN TANK RANGE

For domestic applications

LP1250 Single skin tank

Capacity (Litres)	1250
Length (mm)	1800
Width (mm)	1320
Height (mm)	840
Product code	BFUL-LP1250

H1500 Single skin tank

Capacity (Litres)	1500
Length (mm)	1850
Width (mm)	1300
Height (mm)	1060
Product code	BFUL-H1500

H2000 Single skin tank

Capacity (Litres)	2000
Length (mm)	2300
Width (mm)	1300
Height (mm)	1060
Product code	BFUL-H2000

V1365 Single skin tank

Capacity (Litres)	1365
Length (mm)	1300
Width (mm)	1300
Height (mm)	1370
Product code	BFUL-V1365

SINGLE SKIN TANK RANGE

For domestic applications

V1800 Single skin tank

Capacity (Litres)	1800
Length (mm)	1400
Width (mm)	1400
Height (mm)	1530
Product code	BFUL-V1800

V2600 Single skin tank

Capacity (Litres)	2600
Length (mm)	1580
Width (mm)	1580
Height (mm)	1730
Product code	BFUL-V2600

V3635 Single skin tank

Capacity (Litres)	3635
Length (mm)	1800
Width (mm)	1800
Height (mm)	1840
Product code	BFUL-V3635

V5455 Single skin tank

Capacity (Litres)	5455
Length (mm)	2000
Width (mm)	2000
Height (mm)	2260
Product code	BFUL-V5455

V7270 Single skin tank

Capacity (Litres)	7270
Length (mm)	2085
Width (mm)	2085
Height (mm)	2510
Product code	BFUL-V7270

V10000 Single skin tank

Capacity (Litres)	10000
Length (mm)	2330
Width (mm)	2330
Height (mm)	2920
Product code	BFUL-V10000

UNDERGROUND TANKS

For domestic applications

Underground fuel oil storage tanks are a popular option for small gardens, sensitive landscapes and additional protection when compared to above ground fuel oil storage options.

Balmoral underground fuel tanks are rotationally moulded in polyethylene to produce one piece seamless bodies and necks. They provide discreet and safe storage of oil and diesel. The tanks are designed using computer engineering analysis techniques to ensure optimum strength and performance for underground installation to a standard depth of 500mm.

A basin at the top of the tank neck (See Figure 6) contains a 2” fill point, offtake, contents gauge and overfill prevention valve, all of which are easily accessed via the lockable mushroom lid.

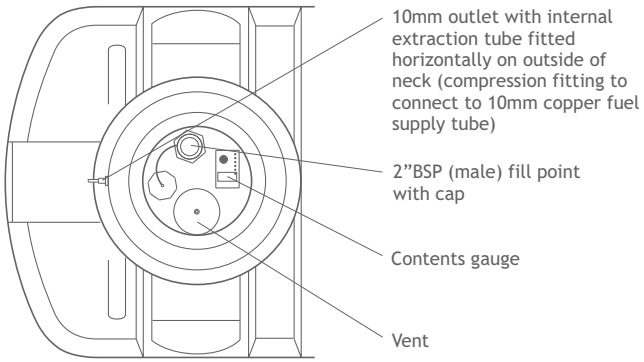
A Tigerloop is also supplied with all underground fuel tanks.

The tanks are available in working capacities ranging from 1370-3090 litres to account for both dead volume and a safety margin.

If you require a tank that doesn’t occupy space in your garden, or you have restricted space, then a Balmoral underground tank is the natural choice.

Balmoral underground tanks comply with the requirements of British Standard BS5410 part 1, Section 6.4h.

Figure 6: Inside tank neck


10mm outlet with internal extraction tube fitted horizontally on outside of neck (compression fitting to connect to 10mm copper fuel supply tube)
2”BSP (male) fill point with cap
Contents gauge
Vent

Clearly label the inside of the tank neck to identify the contents and any relevant safety information.

Underground tank features

- Electronic level gauge
- Overfill prevention valve
- Tigerloop
- One piece construction
- Designed for use as an integral unit
- Made from recyclable polyethylene
- Standard depth 500mm
- Corrosion resistant

All Underground fuel tanks are supplied with electronic level gauge, overfill prevention device and Tigerloop.

UNDERGROUND TANK RANGE

For domestic applications

UG1370 Underground tank

Capacity (Litres)	1370
Length (mm)	1900
Width (mm)	1150
Height (mm)	2020
Product code	BFUL-UG1370-B1-WM-OFP

UG2410 Underground tank

Capacity (Litres)	2410
Length (mm)	2350
Width (mm)	1350
Height (mm)	2220
Product code	BFUL-UG2410-B2-WM-OFP

UG3090 Underground tank

Capacity (Litres)	3090
Length (mm)	3200
Width (mm)	1350
Height (mm)	2220
Product code	BFUL-UG3090-B3-WM-OFP

BALMORAL TANKS

www.balmoraltanks.com

Balmoral Tanks Ltd

Balmoral Tanks Ltd, a division of Balmoral Group Holdings Ltd, is a leading European engineering design and manufacturing company.

As a result of significant investment in people and plant, the company produces what is believed to be the most comprehensive range of tank products available from a single source in the EU.

Civil engineering, wastewater treatment, drainage, fuel oil containment, bulk liquid and potable water storage sectors are all key sectors for the company.

Visit balmoraltanks.com for a comprehensive overview of the company and its products.

Other Balmoral Tanks products

- Wastewater treatment plant
- Rainwater harvesting systems
- Bulk liquid storage
- Chemical storage
- Potable/non-potable water storage
- Fuel oil storage and dispensing
- Trade moulding
- GRP sectional water storage
- Steel sectional water storage

FM518297
Balmoral Tanks

Quality Assurance

Balmoral Tanks Ltd is certified to BS EN ISO 9001. The company's QA manuals are available for examination by all clients.

The Balmoral name has become a brand in its own right, synonymous with product development, technical excellence and manufacturing efficiency.

Balmoral Group

Balmoral Group Holdings Ltd is a privately owned business headquartered in Aberdeen, UK, and has been providing solutions to the civil and environmental, building and energy sectors since 1980.

The enterprise has been built upon research, development and technical innovation. It is this commitment to progress that has helped the company achieve its status as a market leader in its chosen fields of operation.

The company has, for a number of years, successfully operated manufacturing processes at Balmoral Park which are approved and strictly regulated by the Scottish Environment Protection Agency under Part B of the Environmental Protection Act 1990.

www.balmoraltanks.com

FM518297
Balmoral Tanks

BALMORAL TANKS

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